

Borough of Louth.

Annual Report

OF THE

Medical Officer of Health

FOR

The Year 1949.

PRINTED BY
T. E. WIGGEN AND SON, LTD.
"THE PRINTERIES"
LOUTH

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To the Mayor, Aldermen and Councillors of the Borough of Louth.

GENTLEMEN,

I have pleasure in presenting my Annual Report on the Health and Sanitary Conditions of the Borough during 1949 prepared in accordance with the prescribed Statutory requirements.

The statistics so far as they can be taken as an index of the health and welfare of the Borough were in the main satisfactory. The birth rate though fractionally lower than the preceding year did not show the same decline as the national figures. The still birth rate compares unfavourably with the national rate although the actual number of still births here remained much the same as previous years. The death rate now adjusted for purposes of comparison showed a rate higher than that for the country as a whole. Individual rates for cancer, tuberculosis and violent causes were among the increases, and the decreased total of infant deaths under one year provided part of the compensations.

The negligible number of measles and whooping cough notifications accounted for the smaller total of infectious disease cases which however were weighted with a relatively high percentage of poliomyo-encephalitis cases.

Apart from the usual satisfactory routine supervision over general matters of sanitation there is little to report regarding improvement of the sanitary conditions excepting the connection of a small number of houses to the sewer mains. The refuse destructor troubles had not advanced any nearer improvement at the year's end.

Housing matters moved at the pace governed by building allocation. The Housing Act which came into operation during the year opened up possibilities for tackling problems with which we have long been faced, but their solution will require to wait much more careful exploration and planned action.

In the field of food supervision, we can afford to be well satisfied with progress. Taking milk and ice cream as providing factual evidence of the general improvement, a reference to the result of sample examinations will reveal the strides made in the cleaner food campaign over the past few years. Helpful legislation has done its part in achieving these results, but without the steady drudgery of supervision by our Inspectors the outcome would have been very different. Apropos of this, much is talked about and expected from the Model Byelaws which the Council wisely decided to adopt, but any success following their operation will be measured entirely by the extent of the effort that an already fully occupied Sanitary Inspector will be able to devote to their supervision. No case of food poisoning was notified or discovered in the Borough during the year.

I should like to add my thanks, which lose nothing in sincerity by their yearly inclusion, to the Chairman and Members

of the Public Health Committee for their usual help and co-operation. I am indebted also to the Sanitary Inspector and Surveyor for their help and for the material supplied which forms part of this report.

I remain,

Yours faithfully,

W. J. KERRIGAN,

Medical Officer of Health.

Louth :—July 1950

BOROUGH OF LOUTH.

Public Health Officers :

Medical Officer of Health :

W. J. KERRIGAN, M.B., B.Ch., B.A.O., L.M., D.P.H.

Sanitary Inspector :

Appointed Milk and Dairies Inspector from 8th Nov., 1949.

M. DOWSON, A.R.San.I., M.R.I.P.H.H.

Surveyor :

J. C. BARBER, A M.Inst.M&CY.E.

Meat, *Milk and Dairies Inspector (Part Time).

J. V. BEAUMONT, M.R.C.V.S.

*(Mr. Beaumont relinquished the post of Milk and Dairies Inspector 8th November, 1949.)

SECTION A

Social Conditions and General Statistics.

Area of Borough in acres	...	...	...	2,812
Registrar General's estimate of Resident Population				11,380
Density per acre	...	...	...	4.05
Number of Inhabited Houses	...	...	...	3,834
Rateable Value of Inhabited Houses	...	...	...	£35,815
Total Rateable Value	...	...	...	£55,825
Product of Penny Rate	...	...	...	£221

VITAL STATISTICS.

(Note — Figures in brackets show corresponding rates for England and Wales).

Births

(a)	LIVE	Total	Male	Female
	Legitimate	198	95	103
	Illegitimate	9	8	1
		207	103	104

(b)	STILL			
	Legitimate	...	7	7
	Illegitimate	...	—	—
			—	—
			7	7
			—	—

Live Birth Rate per 1,000 of estimated population	18.2	(16.7)
Still Birth Rate per 1,000 of estimated population	0.62	(0.39)
Still Birth Rate per 1,000 of all births	32.7	

Deaths	Total	Male	Female
	170	80	90
Death Rate per 1,000 of estimated population			14.93
Comparative Death Rate per 1,000 of estimated population			12.1 (11.7)

(Comparability Factor 0.81)

Deaths from Puerperal Causes (Headings 29 and 30 of the Registrar General’s Short List) Nil

Deaths of Infants under one year of age :

(a)	Total Cases	Total	Male	Female
	Legitimate	2	1	1
	Illegitimate	—	—	—
		—	—	—
		2	1	1
		—	—	—

- (b) Death Rate all causes under one year :
- (1) Per 1,000 live births 9.7 (32)
 - (2) Legitimate Infants per 1,000 legitimate live births 10.0
 - (3) Illegitimate Infants per 1,000 illegitimate live births Nil

- (c) Causes of Death :
- Premature birth 1
 - Congenital Malformation 1

Ages at Death

Years	0/1	1/5	5/15	15/25	25/35	35/45	45/55	55/65	65/75	75+	Total
	1	1	1	7	2	3	16	25	44	70	170

Cancer Deaths

Years	Under 40	40/45	45/50	50/55	55/60	60/65	65/70	70/75	75+	Total
	—	—	—	3	4	4	4	5	10	30

Causes of Death

		1949	
		Males	Females
1.	Tuberculosis of Respiratory System	1	3
2.	Influenza	2	—
3.	Acute Poliomyelitis and Polioencephalitis	1	—
4.	Cancer of buccal cavity and œsophagus (male) and uterus (female)	1	1
5.	Cancer of stomach and duodenum	1	6
6.	Cancer of breast	—	4
7.	Cancer of all other sites ...	13	4
8.	Diabetes	1	1
9.	Intra cranial vascular lesions ...	7	11
10.	Heart diseases	14	20
11.	Other diseases of circulatory system	5	2
12.	Bronchitis	6	3
13.	Pneumonia	5	6
14.	Other respiratory diseases ...	—	1
15.	Ulcer of stomach or duodenum ...	—	3
16.	Appendicitis	3	—
17.	Other digestive diseases	1	5
18.	Premature Birth	—	1
19.	Congenital malformation, birth injury, infantile diseases	1	—
20.	Suicide	2	2
21.	Road traffic accidents	2	—
22.	Other violent causes	2	2
23.	All other causes	12	15
Totals ...		80	90

SECTION B

General Provisions of Health Services for the Area.

(a) Laboratory Facilities.

The Public Health Laboratory Service at Lincoln centre was freely availed of for the examination of all bacteriological samples and the helpful co-operation of this unit was much appreciated.

The requisite chemical analyses were done by Public Analyst at prescribed charges.

(b) Ambulance Facilities.

One of the main ambulance stations, under the County Council administrative scheme is centred in the Borough which is provided with an adequate and satisfactory service.

(c) Nursing in the Home.

The County Council provision which includes maternity and home nursing is in accordance with the recognised establishment.

(d) Treatment Centres and Clinics.

These clinics were sponsored (a) by the County Council in its capacity as Education and Maternity and Child Welfare Authority and (b) by the Regional Hospital Board.

The following consultant and treatment clinics were provided at places and times given below.

A—At 32, Queen Street, Louth.

School Children.

- (1) Weekly Clinic : Wednesday, 2 to 4 p.m.
- (2) Minor Ailments : Daily, 9 to 10 a.m.

Maternity and Child Welfare.

- (1) Ante-natal : Tuesdays (2nd and 4th), 10 to 12 a.m.
- (2) Diphtheria Immunisations : Tuesdays (2nd and 4th), 2 p.m.
- (3) Child Welfare : Tuesdays (all) 2 to 4 p.m.
- (4) Toddlers : Mondays (1st and 3rd) 10 a.m.

Chest Clinic—Wednesday at 10 a.m.

Special Clinic—Thursday 3 to 4 p.m.

Rheumatic and heart clinics by appointment, as also are diphtheria immunisation (school children) and ultra violet light sessions.

B—At County Infirmary, Louth. Out Patient Clinics.

Opthalmology—Monday 10 a.m.
Surgical—Tuesday & Friday 2-30 p.m.
Genito-urinary—Wednesday 10 a.m.
Medical—Wednesday 2-30 p.m.
Gynæcological—Thursday 10 a.m.
Radiotherapy—Wed. (alternate) 11 a.m.
Ear, Nose and Throat—Saturday 11 a.m.
Orthopædic—Wed. (alternate) 2 p.m.

At Louth & District Hospital. Out Patient Clinics.

Wednesday 12-30 p.m.
Thursday 3 p.m.
Wed. (alternate) 2 p.m.

SECTION C

Sanitary Circumstances in the Area.

Water Supply.

Three houses were connected to the public supply during the year leaving about 27 houses still unserved, chiefly because

their isolated situation in units rendered mains connections both difficult and uneconomic propositions.

Twenty samples of the water from the public supply were subjected to bacteriological examinations at regular intervals, all of which were satisfactory except one assessed doubtful. These were graded thus :—

Grade 1—19
Grade 2—Nil
Grade 3—1

Two chemical analyses were done which confirmed the satisfactory safety standard of the water for domestic uses. As will be seen from the figures quoted in the report given in the Appendix the hardness of this water is its chief drawback.

No material progress was made concerning the Horncastle Road bores further than submission of the scheme to the Ministry of Health for sanction and licence to proceed with the work. These were obtained.

Drainage and Sewage

Closets.

Number of houses with privy vaults in district	...	34
Number of houses with pail closets in district	...	35
Number of pail closets repaired	...	3
Number of water-closets substituted for dry receptacles		8
Number of houses with water-closets in district (approx.)		3,768
Number of water-closets repaired	...	7

Drains.

Drains examined, tested, exposed, etc.	...	43
Drains unstopped, repaired, etc.	...	28
Waste pipes, disconnected, repaired, etc.	...	7
Existing soil pipes, etc., renewed or repaired	...	Nil

Sewers.

New lengths of sewer laid	260 yards on Eastfield Road Housing Site 140 yards on Keddington Road
---------------------------	---

Cesspools.

Cesspools emptied, cleansed, etc.	...	Nil
Cesspools abolished	One joint use by two houses	

Flooding—Monks Dyke Area.

The flooding referred to in my report of last year was considerably reduced by the insertion of a weir near the Eastfield Road housing site for the purpose of diverting the flood water into the river via the surface water drains. This of course was designed as a temporary measure only while awaiting solution of the question of the dyke clearance, and it can function only until the completion, or near completion, of the house building on this site.

Unsewered Houses.

Seven houses were connected to the public sewers during the year—3 in Newmarket, 3 in Kedlington Road and 1 at Riverhead. No further schemes were considered to provide connections to the hundred odd houses still without this amenity.

Sewage Disposal Works.

The Surveyor reported the works to have functioned satisfactorily throughout the year. Three samples of effluent taken at suitable intervals were reported by the analyst to conform to prescribed standards. See Appendix.

House Refuse.

Weekly collection was carried out and disposed of by incineration.

The Sanitary Inspector reported repetitive trouble with the management of the worn out incinerator, which was kept going only by serial patching. In the absence of official sanction to obtain a new plant, endeavour was made to find a suitable site for controlled tipping. This was not found so easy as the suggestion appeared because of opposition from variant sources when a probable site was selected, and up to the end of the year ground was not available.

Disinfection.

Rooms disinfected	...	...	19
(a) Ordinary infectious disease	...	...	4
(b) Tuberculosis	...	...	15
Rooms stripped and cleansed	...	...	Nil
Number of premises disinfected	...	...	3

Nuisances.

Total number recorded during the year :—

(a) Abated as result of informal action by Sanitary Inspector.	168
(b) Reported to the Council :	
(1) Statutory Notice issued	10
(2) Statutory Notice not issued	Nil

Offensive Trades.

(a) Number of premises in district	...	2
(b) Number of Inspections	...	12
(c) Contraventions of bye-laws	...	Nil
(d) Contraventions remedied	...	Nil

Factories and Workshops Act 1937.

(a) Visits made	...	176
(b) Infringements discovered	...	2
(c) Infringements remedied	...	2

Shops Act 1934.

(a) Number of shops inspected	...	42
(b) Contraventions remedied	...	Nil

SECTION D

Housing.

Total number of new Houses erected during the year :—81

- | | | |
|-----|--------------------------------|----|
| (1) | By the Local Authority ... | 70 |
| (2) | By other bodies or persons ... | 11 |

(1) Inspections of Dwelling Houses during the year :—

- | | | | |
|-----|-----|---|-----|
| (1) | (a) | Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts) ... | 225 |
| | (b) | Number of inspections made for the purpose | 346 |
| (2) | (a) | Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925 ... | 52 |
| | (b) | Number of inspections made for the purpose | 80 |
| (3) | | Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation ... | 2 |
| (4) | | Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ... | 65 |

2. Remedy of Defects during the year without service of formal notices :—

- | | |
|--|----|
| Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority of their Officers .. | 38 |
|--|----|

3. Action under Statutory Powers during the year :—

- | | | |
|-----|--|-----|
| (a) | Proceedings under Sections 9, 10 and 36 of the Housing Act 1936 ... | Nil |
| (b) | Proceedings under Public Health Acts ... | |
| | (1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied ... | 3 |
| | (2) Number of dwelling-houses in which defects were remedied after service of formal notices :— | |
| | (a) by owners ... | 3 |
| | (b) by Local Authority in default of owners | Nil |
| (c) | Proceedings under sections 11 and 13 of the Housing Act, 1936 :— | |
| | (1) Number of dwelling-houses in respect of which Demolition Orders were made ... | 1 |

(2)	Number of dwelling-houses demolished in pursuance of Demolition Orders	...	1
(3)	Number of dwelling-houses subject to undertakings	... ..	Nil
(d)	Proceedings under section 12 of the Housing Act, 1936	... ..	Nil

4. Housing Act, 1936—Part IV—Overcrowding.

(a)	(1)	Number of dwellings overcrowded at end of the year	... ..	12
	(2)	Number of families dwelling therein	...	12
	(3)	Number of persons dwelling therein	85½ or 98 individuals	
(b)		Number of new cases of overcrowding reported during the year	... ..	9
(c)	(1)	Number of cases of overcrowding relieved during the year	.. ...	9
	(2)	Number of persons concerned in such cases	50½ or 57 individuals	
(d)		Number of houses again overcrowded after being previously relieved	... ..	Nil

5. Movable Dwellings Tents, Vans, etc.

(a)	Number of site licences	... ..	Nil
(b)	Number of individual licences	... ..	5
(c)	Number inspected during the year	... ..	8
(d)	Number of contraventions remedied	... ..	Nil

The end of the year found a total of 70 houses completed by the Authority of which 54 had been started the previous year. 32 others were in various stages of erection. The completed houses were all of three bedroom type with variation in the living room accommodation.

A larger number of dwellings was rendered fit by informal action than in 1948 and the number of cases requiring action under statutory powers was negligible.

As can be seen by the figures given by the Sanitary Inspector the overcrowding state remained at about the same level as in the preceding year. The overcrowding referred to as occurring at the end of the year was not gross. Seven houses were overcrowded by ½, one by 1½, one by 2, two by 2½ and one by 3½ persons, as defined by the term.

The Housing Act 1949 which became operative during the second part of the year gave promise of going a long way towards helping local Authorities out of the impasse into which many of their housing problems had inevitably drifted. It is difficult to anticipate, until the situation is reviewed in the light of the new powers, how much of the substandard property in the

Borough could be ecomically salvaged by reconditioning, but it seems probable that much of the group properties in the category could be considered only as areas for clearance on account of their bad arrangement and chronic state of gross disrepair.

Much time and effort will obviously requir to be spent, when circumstances permit, to evolve a scheme to provide a solution for the varied local problems over specified time intervals. As the Clerk pointed out, the next few years will be fully occupied by these considerations and it is hoped to see the results of the efforts in the not too distant future

SECTION E

Inspection and Supervision of Food.

Slaughter Houses.

Number on Register : 1.
 Number of Inspections: Daily.
 Number of Contraventions of bye-laws : Nil.

Carcases Inspected and Condemned.

	Cattle exclud- ingCows	Cows	Calves	Sheep and Lambs	Pigs
Number killed (if known)	643	274	596	3007	317
Number inspected	644	275	600	3056	332
(a) All diseases except Tuberculosis					
Whole carcases condemned	6	7	5	21	3
Carcases of which some part or organ was con- demned	82	37	1	30	7
Percentage of the number inspected affected with disease other than Tuberculosis	13.66	16.0	1.0	1.66	3.01
(b) Tuberculosis only—					
Whole carcases condemned	6	17	1	—	4
Carcases of which some part or organ was con- demned	16	24	1	—	4
Percentage of the number inspected affected with Tuberculosis	3.41	14.9	.33	—	2.41

Dairies and Milk Shops.

Number on Register : 26.
 Number of Pasteurizing Licences : 1.
 Number of Inspections : Monthly.
 Contraventions remedied : 1.

(The above information is supplied by the Inspector under the Milk and Dairies Order and the Meat Regulations 1924).

Bakehouses

Number in District : 16.
Number of Inspections : 49.
Number of Contraventions : 3
Defects remedied ; 3.

Model Bye-Laws.

The Council decided to adopt the Model Bye-laws Series 1 of the Ministry of Food, relating to the handling, wrapping and delivery of food and the sale of food in the open air. No time was lost in making application for the necessary sanction to have them put into operation.

Milk.

The Raw milk suppliers consisted of 2 T.T., 3 Accredited and 5 non-graded producer-retailers, and the pasteurized milk was supplied by Blades, Kidgate Dairies and Great Grimsby Co-operative Society. A supply of sterilized milk was also shop retailed.

The percentage of heat treated milk sold in the Borough was ascertained to be about 70% of the total supply which shows a yearly increase and manifests the consumer interest in a safe form of supply. All the local schools were supplied by raw T.T. or pasteurized milk.

The result of the regular sample tests are as follows :—

Type	Satisfactory	Unsatisfactory
T.T. and Accredited	11	2
Non-graded	19	1
Pasturized	25	3
Totals	55	6

It requires to be mentioned that the pasteurized samples listed as unsatisfactory were subject to unfair tests on account of the overnight storage temperatures at the laboratory having been exceeded. These results should therefore be discounted.

The results for the non-graded milk are truly excellent. When it is remembered that four years ago only 36% of the non-graded samples were satisfactory, the extent of the improvement to 95% this year, by the same test standards, will be appreciated. The producers in question deserve full measure of congratulation for this outstanding achievement which more than compensates the supervising officials for the success of any efforts they have been able to contribute towards the improve-

ment. It is a very unusual occurrence to see, as here, the ungraded samples placed in a relatively better category from standards of bacterial cleanliness, than the special designation raw milk, though the latter type also shared in the improvement.

During the latter part of the year the Milk and Dairies Regulations, 1949, became operative. Owing to the nature of the duties involved by the new regulations the Council appointed the Sanitary Inspector to take over the duties of Milk and Dairies Inspector. This arrangement was expected to secure more direct supervision and a closer departmental working scheme.

Ice Cream

During the year there were two producer-retailers and fifteen retailers of ice cream in the Borough, apart from itinerant vendors. All except two of the retailers sold ice cream manufactured outside the district. Eleven new premises were registered for retail sale only during the year.

The result of sample tests were as follows :—

Grades	1	2	3	4
(a) Produced in Borough	13	1	—	1
(b) Produced ex Borough	33	7	4	2
Totals	46	8	4	3

Judged by the recommended national standard that 50% of a vendor's samples should fall into Grade 1, 80% into Grade ¹⁰⁰₂ and none in Grade 4—over a six monthly period—the results above showed we had no consistently unsatisfactory vendor but many consistently good. The single fall from virtue in the local production spoilt a picture of excellence but it is pleasing to record that one local producer had 100% of his samples Graded 1—a record he continues to maintain.

The results of samples from those engaged in retail trade only—composing the great majority of (b) above—seldom approach the standard of those of the producer-retailer who has a better understanding of the hygienic principles involved and a natural pride in his own manufactured product. Moreover, it is difficult to bring home responsibility for an unsatisfactory test unless a sample had been taken immediately on its arrival from the producer. Owing to the small number of samples taken from the retailers the results require to be assessed on aggregate rather than individually, and as such they easily conform to the accepted standard. It is pleasing to see the negligible total under Grade 4.

As in other years follow up visits after a Grade 3 or 4 test were made, and in every case the producer and retailer were informed of the result of the sample test except when the ice

cream was manufactured in London. This notification to the outside producer stimulated his interest in the retail welfare of his product.

Nine samples were examined for estimation of the fat content and all except one exceeded the very humble standard required at present.

SECTION F
Prevalence of and Control Over, Infectious and other Diseases.
Infectious Diseases other than Tuberculosis notified during 1949, excluding Service Cases,

Disease	Total Cases Notified	Cases admitted to Hospital	Total Deaths
Para Typhoid Fever	1	1	—
Polio Encephalitis	2	2	1
Poliomyelitis	6	6	—
Diphtheria	—	—	—
Whooping Cough	8	—	—
Scarlet Fever	9	2	—
Pneumonia	2	1	—
Measles	7	—	—
Chicken Pox	27	—	—
Others—revised diagnosis as non-notifiable	2	2	—
Totals	64	14	1

The total number of infectious diseases notified was relatively small on account of the few cases of Measles and Whooping Cough. The only cases showing an increase were the Polio group which were notified in the months and in the ages following. The attack rates in terms of population compared with similar rate for the country as a whole were Poliomyelitis 0.53 (0.13) Polio Encephalitis 0.18 (0.14)

Months	August	September	October	November	December
Cases	3	2	1	1	1
Ages in Years	1-7-19	32-4	8	14	65

The origin of the single case of para typhoid B. could not be traced.

DIPHTHERIA IMMUNISATION.

Immunised during 1949.

(a)	0 to 4 years	..	...	157
(b)	5 to 14 years	...	...	11
(c)	Reinforcing injections	...	...	146

These figures do not include cases done privately by general practitioners.

School Children.

The following table shows the percentage of children immunised between the ages 5 to 14 years, inclusive, who attend the primary and secondary grant added schools in the Borough, which is based on a survey of each school by the headmaster.

Name of School	No. on Roll.	Per cent Immunised
Eastfield Road Junior	492	98
Kidgate Junior	399	92
St. Michael's Junior	178	90
Girls' Grammar	197	92
Boys' Grammar	134	92
Monks Dyke Senior	490	85
Average per cent immunised 92		

Vaccinations.

I am indebtedness to the County Medical Officer of Health for the return below of the total vaccinations, relating to Borough residents under particular age groups.

Ages	Under 1 year	1-4 years	5-14	15 +	Total
Primary					
Vaccinations	15	13	3	1	32
Revaccinations	—	—	1	1	2

Tuberculosis : New Cases and Mortality during 1949.

Age Periods (years)	New Cases				Deaths			
	Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
	M	F.	M.	F.	M.	F.	M.	F.
0								
1								
5			2	1				
15		1				2		
25								
35								
45	1		1			1		
55					1			
65+								
Totals	1	1	3	1	1	3	—	—

Appendix.

Water and Sewage Analysis.

The Sample of

WATER

Received from the Borough of Louth per Surveyor on the 25th May, 1949. Sample taken on 24th May, 1949.

Has been examined with the following results:—

Sample is clear and bright without taste and odour.

Total Solids dried @ 100° C.	parts per million
Free Ammonia	276.0
Albumenoid Ammonia	0.045
Nitrogen as Nitrates	0.012
Nitrogen as Nitrites	1.3
Hardness (Clark's) Total	nil
Permanent	221.0
Temporary	83.2
Chlorine as Chlorides	137.8
Free Chlorine	18.5
	0.025

Bacteriological Examination.

Colonies per 1 ml. on agar @ 20° C.	nil
Colonies per 1 ml. on agar @ 37° C.	nil
Probable number of B.Coli per 100 ml.	nil

This sample of water is satisfactory in all respects for a Public Supply.

J. R. HUNECKE, Consulting Analyst.

The Sample of **SEWAGE EFFLUENT**

Received from the Borough of Louth, per Surveyor, on the
27th January, 1949. Sample taken on 26th January, 1949.

Has been examined with the following results :—

	Parts per 100,000
Total Solids dried @ 100° C.	62.0
consisting of Organic Matter	12.5
and Mineral Matter	9.67
Free Ammonia	0.750
Free Ammonia as N.	0.618
Albumenoid Ammonia	0.048
Albumenoid Ammonia as N.	0.039
Nitrogen as Nitrates	1.35
Nitrogen as Nitrites	0.20
Total Sulphur as S.	3.29
Unoxidised Sulphur	nil
Sulphuretted Hydrogen	nil
Oxygen Absorbed from N/80 Permanganate in	
15 mins.	0.214
Oxygen Absorbed from N/80 Permanganate in	
4 hrs.	0.557
Dissolved Oxygen Absorbed in 5 days B.O.D. Test	
(10 to 1 dilution)	0.616
Sediment	1.219
consisting of Organic Matter	0.642
and Mineral Matter	0.577
P.H. Value	6.5

This sample of effluent is excellent and complies fully with
the standards set by the Royal Commission on Sewage.

J. R. HUNECKE, Consulting Analyst

